THE Soybean Digest

Official Publication

OF

THE AMERICAN SOYBEAN ASSOCIATION

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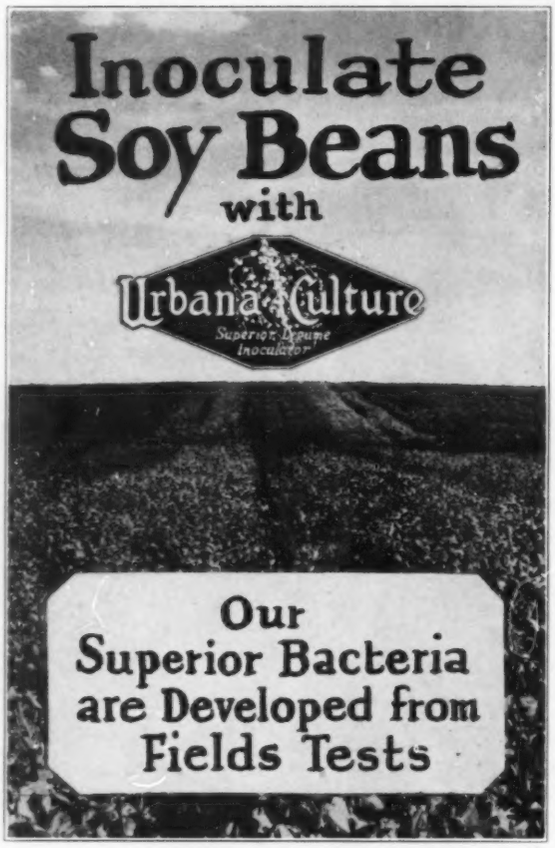

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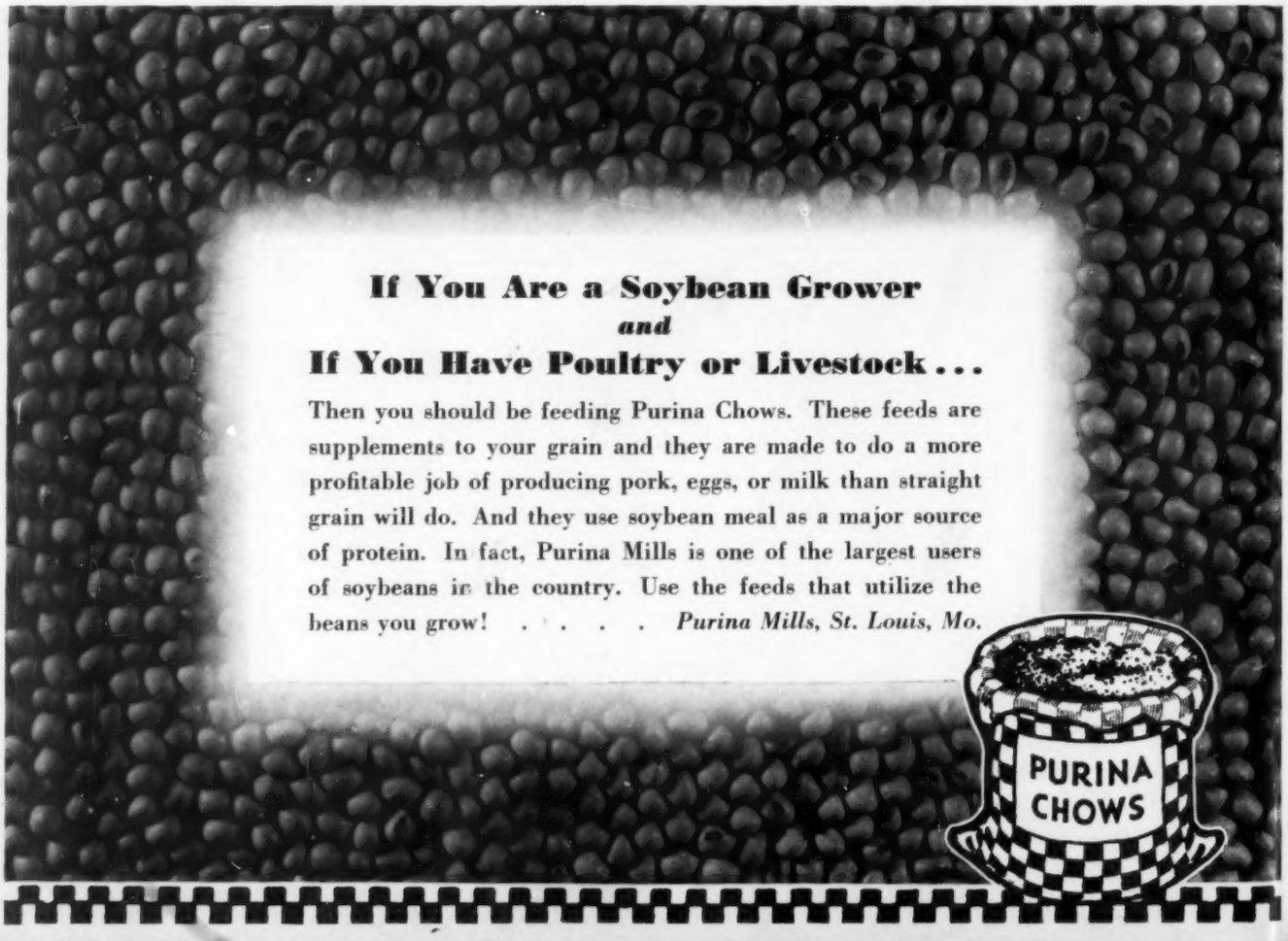
If You Are a Soybean Grower
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If You Have Poultry or Livestock . . .
Then you should be feeding Purina Chows. These feeds are supplements to your grain and they are made to do a more profitable job of producing pork, eggs, or milk than straight grain will do. And they use soybean meal as a major source of protein. In fact, Purina Mills is one of the largest users of soybeans in the country. Use the feeds that utilize the beans you grow! . . . . . Purina Mills, St. Louis, Mo.
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AN ORGANIZATION OF THOSE INTERESTED IN THE PRODUCTION AND UTILIZATION OF THE SOYBEAN

AMERICAN SOYBEAN ASSOCIATION

J. B. EDMONDSON, SEC.-TREAS. CLINTON, INDIANA
GEORGE M. STRATTON, EXEC. SEC'Y HUDSON, IOWA

C. C. McILROY, PRESIDENT IRWIN, OHIO
DAVID G. WING, V. PRESIDENT MECHANICSBURG, OHIO

Irwin, Ohio
November 14, 1940

To The Members Of the
American Soybean Association
And Others:

The soybean industry which has developed so rapidly during the last ten years must depend on our Association for leadership. It is only through our organization that the varied and specific interests can join to work for the common cause.

In order to develop this leadership and to meet the accompanying responsibility it was necessary that we have an Association publication. Here it is, "The Soybean Digest". We are pleased to present it to you and we hope it meets with your approval.

Although we are primarily a growers organization the editorial policy of this organ will be to work for the general welfare of the soybean industry, and not for any one of the many special interests to the detriment of associated interests. Future success can be attained only by a strict adherence to this policy.

It is your publication. And, it is your obligation to assist us in every way possible to lead our rapidly moving industry down the center of the road to greater expansion and prosperity.

Give us the benefit of your constructive criticism.

Cordially yours,

Glen C. McIlroy, President
AMERICAN SOYBEAN ASSOCIATION

GCM:EW

A NON-PROFIT ORGANIZATION OF GROWERS

Behind the Scenes...

The American Soybean Association, now of age, shifts interests with expansion of the industry

FOR many years the culture and utilization of the soybean in the United States was the work of pioneers. Through the distribution of seed and literature on cultural methods, the early growers in the great Corn Belt enlisted new friends for the crop in increasing numbers. Through the efforts of growers and state colleges and experiment stations Soybean Field Days became quite common in many sections of the Corn Belt. American agriculture and industry soon realized the value of the soybean and its products.

First Organized 1920

The first movement to organize the soybean interests of America dates back to September 3, 1920, at a mammoth soybean meeting held on the Soyland Farms, owned by the Fouts Brothers, Camden, Indiana. This meeting was called under the auspices of the Purdue Extension Department, primarily for the purpose of acquainting corn belt farmers with the virtues of this new crop. In contrast to similar meetings of today, it is significant that the attendance was practically one hundred percent farmers, county agents, and members of educational institution staffs.

The enthusiasm aroused by the possibilities of this crop expressed itself at this first meeting in the formation of an organization which was named, "The National Soybean Growers Association." Its purpose was largely educational; no membership dues were provided for, as the leaders anticipated no particular need for funds to carry on the program of the organization. Working in close cooperation with the agricultural experiment stations and extension departments in the different states, the Association, thus organized, carried on a comprehensive educational program during the next four years. This program proved of incalculable value to the future development of the industry.

Attain Commercial Status

During this period, the soybean rose from a freak crop in the garden to one that was threatening to challenge the claims of old King Corn himself to the best acres on the farm. The great Middlewest, somewhat bored by too much corn growing, seized on this new plant with gusto and began cultivating it in ever expanding acreages. Soon soybean production reached a point beyond the needs of the farm itself, and new outlets were needed to prevent a surplus.

In the minutes of the third business meeting of the Association, held in Chicago in 1922, appears this interesting statement: "Mr. I. C. Bradley, pioneer in soybean oil extraction in the corn belt states, was called upon to discuss the possibilities of using domestic grown beans for crushing. Some very interesting and valuable information was given by Mr. Bradley concerning his experience in crushing corn belt soybeans for oil and oil meal."

Thus the soybean in a few short years moved away from the farmer's grain bin and entered the commercial world. This not only introduced for the first time a marketing problem but it also claimed the attention of a host of keen minded men who were interested, not in the production, but in the processing of soybeans. This situation with its multiplicity of new problems, made it imperative that the Association broaden its field of activity if it hoped to continue serving the soybean interests. The clear headed leaders of that day appreciated the need.

Adopt New Name

At a winter meeting of the group at Chicago in 1925 a complete reorganization of the old association was made. The result of this important meeting was "The American Soybean Association," as we know it today. A constitution and bylaws were eventually adopted, a membership fee was included, and provisions made to insure representation in the commercial and legislative field through the activities of special committees. This last feature was especially important since it allowed opportunity for a tremendous broadening of the Association's influence in fields that were sorely in need of attention.

For the past twenty years the American Soybean Association has carried on its work with varying degrees of success, under the guidance of able and enthusiastic leaders. A highly complex situation has long since brought into the fast moving drama a demand that the American Soybean Association broaden its activities, not only to include production problems, but the more intricate ones of marketing, processing, and the ultimate utilization of the product.

Even though handicapped with finances inadequate to wage many of the legislative battles necessary to maintain satisfactory domestic markets for soybeans, the work of the American Soybean Association legislative committee during the past few years has been remarkably effective. Much of this committee work has been accomplished by men who were willing to give freely of their time and money so that soybean growers everywhere might profit thereby.

The twentieth anniversary of the founding of the American Soybean Association marks an interesting milestone in the remarkable development of the soybean industry.

Emphasis Shifts

First interests of the organization were in the production field. Today the Association is less concerned about questions of cultural practice, but is giving more and more attention to problems of utilization. This shift in the Association's activities is significant and important in appraising its value and influence to the soybean industry. With twenty to fifty percent increases in production taking place each year, it is obviously no longer necessary for this Association to encourage greater acreages of soybeans; instead, the problem now is one of developing a continuously expanding market through industrial processes that may absorb these increasing supplies. The crop is here. Today's problem is to utilize it. The American Soybean Association is concentrating a large part of its efforts in that field. Legislative action is also still very important.

Enter Legislative Field

It was through the efforts of the Legislative Committee of the American Soybean Association, in cooperation with the American Farm Bureau Federation, the National Grange, and the Dairyman's League that the $6.00 per ton tariff on imported soybean cake and meal was levied in 1928. This built the foundation for the Legislative Committee. Since that time it has assisted in the enactment of the Bailey Amendment to the 1936 Revenue Bill which levied a processing tax of from three to five cents per pound on the chief foreign oils imported for processing.

During the 1938-39 fiscal year the Association cooperated in the work of the Domestic Fats and Oils Conference, along with eight other national organizations. Efforts to increase the import levy on foreign fats and oils have been unsuccessful to date. However the Legislative Committee has been continued in an active capacity and its members closely watch all developments which may affect the industry.

. . . No Other One Crop

Increased acreages and yields since 1930 have brought soybeans to status of major crop

NO other one crop in American history has ever shown such tremendous increases in acreage as have soybeans since 1919, and especially since 1930. Almost every year brought increases in both acreage and total yields.

It was in 1919 that the United States Department of Agriculture decided there were sufficient acres of beans to justify recording the figures. That year there were 99,000 acres in the nation, most of them in the deep South. The 4,226,000 acres grown in 1939 were concentrated largely in six states, five of them in the Corn Belt. The accompanying graph shows acreage increase, by years, for the nation.

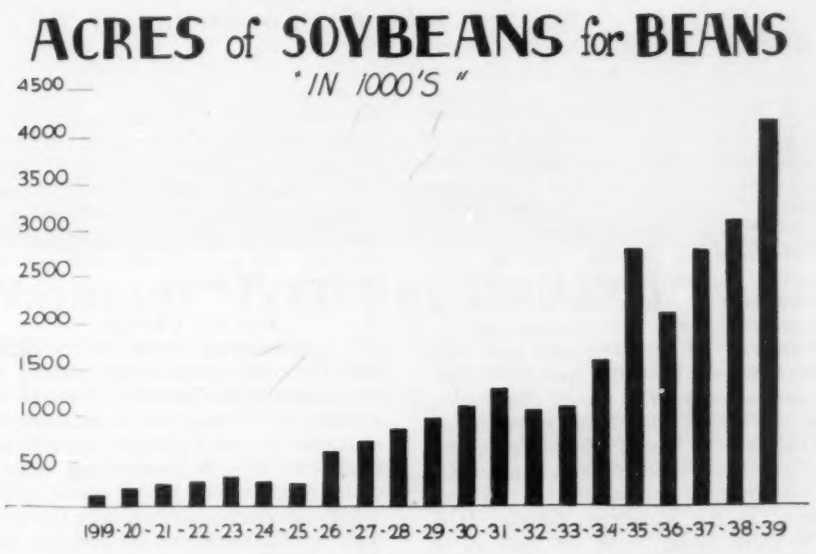
From 1924 to 1939—a period of 15 years—the yield in bushels per acre virtually doubled. The 1924 average was 11 bushels. By 1939 the average was 20.7 bushels per acre. Improved varieties, better cultural practices and more efficient harvesting account for the increase.

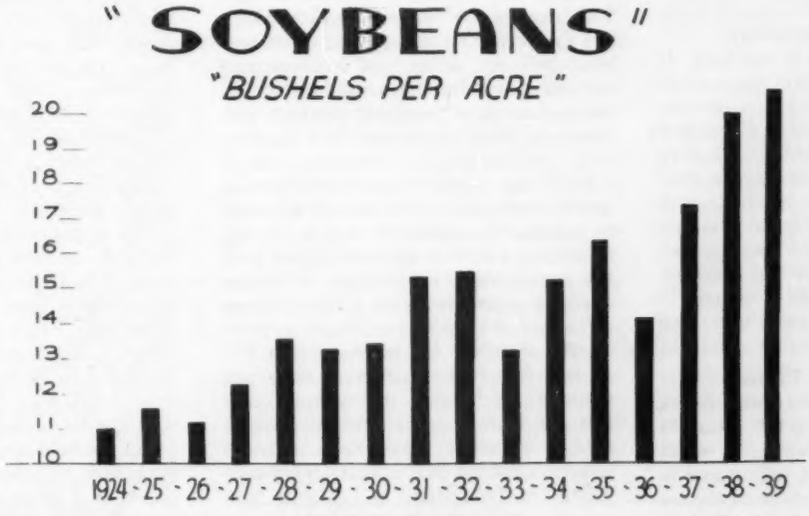
The phenomenal increase in soybean production is best demonstrated by total bushel production. In 1924 only 4,947,000 bushels were harvested. In 1939 a total crop of 87,409,000 bushels were produced. 1940 estimates show a slight decrease in total production because of the drought in eastern Corn Belt states.

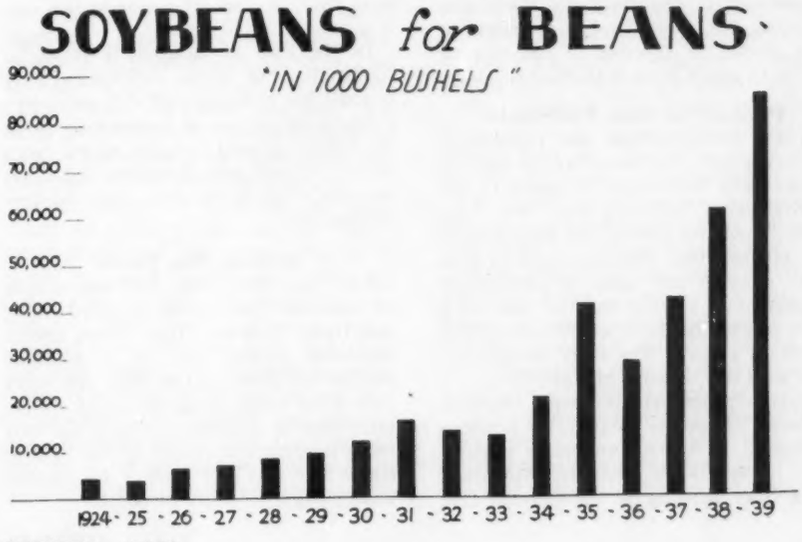
By October 1937 sufficient soybeans had become available in commercial markets to justify the inauguration of trading in future soybean contracts by the Chicago Board of Trade. Further increases of supplies, along with widespread handling of beans by local grain dealers and elevators selling through brokers and commission companies, prompted the installation of a separate soybean trading pit by the Chicago Board of Trade in December of 1939. Soybeans are the first crop to be added to the Chicago Board of Trade list in many years.

Today, with a large share of the nation's soybean production going to processors, more than 96% of the soybean oil resulting from oil extraction goes back into livestock feeding channels. This is in contrast to the general belief that large quantities of soybean meal were going into plastics and other industrial products.

In general, one bushel of beans produces one gallon of soybean oil and 48 pounds of meal. The price which the processor can obtain for those two products determines the price he can pay for market soybeans. Oil prices are governed by prices of competitive fats and oils. Meal prices are controlled by price schedules on linseed meal, cottonseed meal, tankage and other high protein feeds with which there is direct competition.







Full Soya *in the . . .* SOLDIER'S DIET

Translation of an article by Dr. H. Weiss, Berlin, in "Die Landward," May 10, 1940. Contributed by Herschel V. Johnson, Counsellor of the Embassy, London

THE considerable importance of the soya bean as a nutrient has been known in Europe for several decades, while in the Far East it has been one of the most important foodstuffs for at least 5,000 years. It was Professor Haberlandt of Vienna who, in 1872, pointed out how intensive a foodstuff the soya bean is, but it was not until the beginning of the 20th century that the European oil industry consumed soya beans in ever increasing quantities. German factories were among the leading in the field of soya bean fat extraction. However, this way of using the soya bean is by no means the most economical because the soya bean contains only 16 percent fat, but 36 percent protein. It is, therefore, rather a protein than an oil food.

Proteins Used Indirectly

Protein is irreplaceable in our food. It is, therefore, important that the protein residues, which the extraction process yields, are not simply wasted. These protein residues are contained in the soya bean meal, and soya bean meal is used exclusively as food. The available protein, therefore, is used in human nutrition only indirectly by way of the livestock industry. This indirect method, however, entails a considerable waste, since only 10 percent of the available protein, if used for feeding, becomes ultimately available.

Protein Residues Utilized

A new method of utilizing soya beans, which has been practiced for about 15 years in Germany as well as in other countries, is of the utmost importance in the effort to use soya beans not only for their oil content but for their entire nutritive value. The soya bean by simple cooking methods cannot be prepared in a way acceptable to European taste. This is why various scientists, such as Berczeller, Kupelwieser and others, devised the methods of milling and extracting the bitter substance from the soya bean in its original condition. The yellow flour which results from this process contains about 40 percent protein, 20 percent fat (1 to 3 percent lecithin), 27 percent carbohydrates, 5 percent ash and 8 percent water. This flour is called full soya or pure soya.

Exceeds in Proteins

This soya bean flour has no affinity to our ordinary flours. It differs from them both in its chemical composition (grain flour has from 11 to 12 percent protein, almost no fat, but 68 to 60 percent carbohydrates) and in its baking properties (grain flour has a high gluten content, full soya has no gluten at all). There is more similarity between full soya and our domestic legume flours, but full soya exceeds the latter considerably, both quantitatively and qualitatively, in respect of protein and fat content.

Fats Are Effective

In fact, full soya can only be compared with livestock products, over which it has considerable superiority, however, as a result of its very low water content. (Soya bean flour 8 percent, meat 65 to 80 percent, milk 87 percent, egg 74 percent.) One kilogram of full soya is equivalent, as regards protein and fat content, to 2½ kilograms of beef, or 7½ litres of full milk, or 54 chicken eggs. Full soya is used only as an ingredient for the nutritive improvement of various foodstuffs and dishes, and is never used exclusively for the preparation of a dish. Soya flour is a vegetable product and, therefore, costs much less than the livestock product which it replaces.

Full soya is also important as an ingredient the utilization of which makes it possible to economize in fats. It appears that a very large share of our total fat consumption is not due to human nutritive requirements for fats, but rather to factors of taste and technique in preparation of dishes. It has been shown that in regard to these factors of taste and preparing technique, the utilization of fats which are thinly and evenly distributed produce the same effects as much larger quantities less effectively distributed. The fat content in full soya flour is particularly effectively and thinly distributed, and considerable economy in fats should be possible in the case of dishes to which soya bean flour is added.

Promote Soybean Production

These considerations and experiences are being made full use of by the fighting forces. The discoveries in regard to the utilization of full soya flour have been partly made by men in the supply services of the army. The utilization of soya bean flour in our army is particularly important in view of the fact that soya bean production has a secure basis within Germany's reach. The army, in conjunction with the Ministry of Agriculture, has actively promoted domestic soybean growing within the frontiers of previous Germany, in Austria, and more recently also in the Polish districts. Moreover, soya bean growing by the German Dye Trust in Balkan countries, particularly Rumania, has assured a current supply which by far exceeds the largest possible requirements of the fighting services.

Excellent Keeping Qualities

As has been pointed out by Dr. Ziegelmayer, the army's preference for full soya is not only based upon the considerations which have previously been pointed out, but also upon specific military considerations. In this connection, the low water content of full soya and its extraordinary keeping quality are important. No special methods of preservation are required in storing full soya. The product is being used in the army, firstly, in the field kitchens, secondly, as an addition to industrially produced foods and, thirdly, in the preparation of new types of foodstuffs to be used for certain purposes. Full soya has already been used before the war in the field kitchens. In September, 1938, a collection of 262 recipes for field kitchens was issued. The utilization of full soya in the field kitchens has made it possible to economize in various ways. In the case of minced meat dishes, there was a saving of 25 percent of the quantity of meat previously used, although the meat portions were increased from 25 to 45 percent. Furthermore, eggs have largely been replaced by full soya bean flour. Milk in the preparation of dishes is largely being replaced by a mixture of 1 to 10 full soya bean flour and water. Full soya is also added to cheese with low fat content and used for cooking fat in the field kitchens. It is possible, in particular, to economize in fat for liquid dishes as a result of an addition of soya bean flour. Actual fat saving in this case is estimated at 40 percent.

In the case of industrially produced foodstuffs, the army authorities have ordered the utilization of full soya, particularly in the case of tinned soup. Soya bean flour is used also for mixed cocoa drinks, biscuits and chocolate. Additions are also made in the case of tinned liver sausage, etc.

Develop New Foods

Full soya bean flour has also played an important part in the development of new foods, such as certain soups, sweets, vegetable cutlets, etc. It is generally realized in army circles that the work they have been doing in regard to the utilization of soya bean flour is not only important for the supply of the fighting forces but also as a pointer for civilian consumption in times of peace.

Plastic Fords

Reprinted from "Time," the weekly news-magazine, for November 11, 1940

FOR ten years whooping moppets have whanged rubber and composition automobiles into toy automobiles, table legs, baseboards. Thought many a fender-dented father: "If our car were only like that!" dismissed the wish as fantastic. But last week this wish neared the border-line of reality. Henry Ford, 77, gleefully swung an ax with all his lanky might against the plastic rear end of a special Ford car. Then he pointed to the undented, unmarred finish, announced his company would be mass-producing plastic-bodied automobiles in at least one, at most three years.

If thousands of light, near-collision-proof plastic automobiles ever roll on United States highways, a notion and a man should get the glory. The notion was Henry Ford's: that man should go back to the land, that the use of agricultural products in industry should be multiplied. The man is stoutish, balding Robert Allen Boyer, a chemist who looks older than his 31 years, has silver hair among the brown. An ardent believer in boys, Henry Ford discovered Robert Boyer in 1925 while visiting Ford's Wayside Inn, managed by the boy's father, Earl Joseph Boyer. Attracted by Robert's active interest in what made the world go round, Ford took him out of the Framingham High School (near Boston), where he was a hockey and baseball addict, "B" chemistry student, later enrolled him in the Ford Trade School.

A boss's pet from the start, Boyer blossomed in the F. T. S. He took to such brain-crackers as how to manufacture synthetic wool from soybeans, a type of problem that made experts stare blankly but were longtime reveries of Motor-maker Ford. In the summer of 1930 Ford built him a three-story frame laboratory behind the Museum in Greenfield Village. Designed as a temporary structure, the lab still stands. In it Boyer and his 28 aides have done many strange things — mostly with soybeans, No. 1 farm product to Henry Ford. From this bean Boyer has extracted lubricating and paint oils, made a synthetic wool, pressed insulating varnish for starters and generators, and also extracts the male sex hormone.

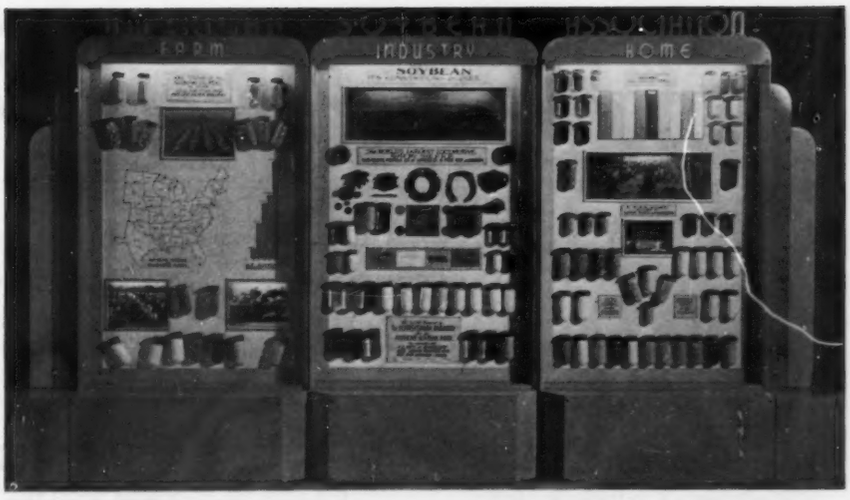
When Henry Ford begins his daily rounds of River Rouge, his first stop is the white-walled Boyer lab, which he thinks will soon be the most renowned building on his property. When his tan, lean face bends next to Boyer's ruddy, cherubic face over the desk, they look like two schoolboys plotting a prank. There is nothing either can suggest that is not immediately okayed, put into action. Recently Boyer needed a 1,000-ton steel press (about the size of a ten-story building) for his plastics experiments. So Ford conspired with him to "steal" one of three giant presses then being delivered to the Production Department, had it sidetracked for Boyer's exclusive use.

Alert, healthy, Bob Boyer is a Ford man. Just as he now hopes to mold his plastics into cars, his habits have been molded by constant hobnobbing with Ford. He never smokes nor drinks, likes the same old-fashioned dances his boss likes, even likes to eat roasted soybeans, soybean bread, soybean soup. With a soul-deep belief in every Ford dream, Boyer last week was stunned with joy. His chief gave him authority to order a complete set of dies for the first road model of the plastic automobile.

Unlike most commercial plastics, the Boyer sheets for automobiles look like polished steel. Test panels are 70% cellulose fibre, 30% resin binder, pressed into cloth. Alone the cloth has little strength. But several sheets heat-molded in a 1,000-ton press produce a material superior to steel in everything but tensile strength. It is 50% lighter, 50% cheaper, ten times stronger. Bent like a jack-knife in a huge press, plastic panels snap back into shape when the pressure is released. Continual assaults with heavy axes, hammers have no visible effect on the shiny, rustless panels. Their color is not paint but inbred in the plastic. Fenders of this Buck Rogers material, though not quite unbreakable, withdraw from minor collisions with lamp posts, etc., like unhurried rubber balls.

To make his super-plastic, Ford is going to the soil. One million plastic automobiles (average annual Ford produc-

(Continued on page 11)



Soybeans' Traveling Emissary . . .

TO BE shown, by request, in the first floor foyer of the United States Department of Agriculture Building in Washington, D. C., for the month of November is the honor accorded the traveling soybean exhibit pictured above.

This exhibit was prepared for the American Soybean Association by the agricultural department of the Pennsylvania railroad, under the direction of Russell G. East. The United States Department of Agriculture, the National Soybean Processors Association and the National Farm Chemurgic Council cooperated in assembling and preparing material.

First shown at the American Soybean Association meetings in Dearborn, Michigan, on August 18, 19, and 20, the exhibit then went to several state fairs and local shows before going to Washington. It is expected to be shown almost continually through the winter months.

The first panel in the new exhibit shows the states having greatest production of soybeans, where the Soybean Processing plants are located, calls attention to the use of 90% of the soybean oil meal production as feed for livestock and poultry on the farm, and shows the various products of the great Commercial Feed industry.

The highly colored laminated board in the center can be used as flooring, wallboard, etc. The auto accessories, soap, linoleum, paints, varnishes, wood preservatives and crude lecithin all come from the soybean as well as the wool, together with the finished product in the form of upholstery.

Progress in the use of the soybean and its products in the home is shown in the third panel. Note the attractive paints and varnishes developed by the U. S. Regional Laboratory at Urbana, Illinois, as well as the cheaper traffic paints.

Centering this panel is a Pennsylvania Railroad Dining Car finished inside and out with soybean oil and varnish, illustrating how this farm crop enters into the daily life of the traveling public.

Flour for various uses, cooking and salad oils, nut butter, soy spread, wafers, nuts, macaroni, spaghetti, bread and cookies, together with soy milk, chocolate drink, coffee substitute, candy coated soy puffs are a few of the uses in which soybeans are prepared for human consumption.

THE Soybean Digest

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VOL. I · NO. 1

May We Present . . .

IT was something like a dozen years ago that a little fellow with oriental appearances and customs made his commercial bow in the United States. He had visited our country at earlier dates — in fact his first visit was about 1804 — but he had not previously decided to try for an impression.

Even a dozen years ago no one took him too seriously. Hadn't he been with us for years? With no apparent impression? And was his rightful domain not that of the orient, where hand labor was still cheap? And where his chief use was the furnishing of protein in the diet of humans whose foods were otherwise almost entirely carbohydrates?

Yes, a few men had become full acquainted with him, knew his traits, his good qualities, his faults. In most cases they had become his disciples, too, preaching his doctrine at every opportunity. Yet the acceptance of their deity by the American farmer and industrialist was not particularly wide-spread, viewed in present-day terms.

Then something happened. Other developments followed. New and important positions were found for Sammy Soybean. New impetus was added to the words of his disciples. He became an indispensable addition to the list of American industrial raw materials. He found his way into food products, inks, paints, glues, plastics and scores of other industrial products. Automobiles began to glisten with a surface coating made from his oils. Feeders of livestock found the processing residues to be highly valuable protein concentrates. Hundreds and then thousands of tons of soybean meal went into mixed feeds.

Production soared. The governmental crop control program added impetus. Sammy's resistance to drouth, insects and diseases became generally known. New millions of acres went into soybean production. New methods of planting, cultivating and harvesting were developed. New farm machinery, designed for soybean use, was placed on the market. Processing plants sprung up throughout the soybean belt. A newcomer was replacing cotton — and corn — and oats — and wheat — on America's farms. Production reached about 87 million bushels in 1939. Consumption seemed to keep pace.

Today a little cousin, *Soybean Digest*, makes his bow to the American public. He, too, is unpretentious and a bit timid in his first appearance. Yet, given the moral support of an industry approaching the 100 million bushel mark, and guided by those disciples who have charted the course of his cousin so well, he can see his place in the complete field. Guided by the belief that his cousin is destined to occupy increasingly important positions within the nation, *Soybean Digest* hopes to contribute, in a constructive way, to that traditional American progress which makes full and immediate use of the products of its ingenuity The dissemination of information about developments in the soybean field will be his duty.

To that job he is dedicated.

—sbd—

Our Editorial Policies

Short, concise, terse, condensed and to the point.

The bold, unexpurgated, unbiased and unprejudiced truth.

We will attempt to combine them to bring to you the news of the soybean industry in readable form.

Condensation is the order of the day. Books, stories, manuscripts — they must all be briefed before you will take time to read them. The pace of American business and life demands knowledge of essentials, elimination of unessential details. If we carry our briefing to the point where you want further details on a story, they will be furnished on request from you. *The Soybean Digest* will attempt to bring you only the essentials.

Growing, marketing, handling, processing and sales will all be considered. Will you tell us about the articles you like? And especially about those you do not like? And send us news of developments in your company, your state, your locality? Pictures, too!

—sbd—

THE AMERICAN SOYBEAN ASSOCIATION

President.....G. G. McIlroy, Irwin, Ohio
Vice President.....David G. Wing, Mechanicsburg, Ohio
Secretary-Treasurer.....J. B. Edmondson, Clayton, Indiana
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INCREASE YOUR FARM PROFITS

» Feed SOYBEAN OILMEAL by preference, thus making a better market for your cash soybeans. . . . Try our CEDAR VALLEY BRAND 41% Protein Old Process Soybean Oilmeal — our prices are modest. . . . Our bids are generous on soybeans for milling.

SOY BEAN PROCESSING COMPANY
WATERLOO, IOWA

Makes Constitutional Amendments at Dearborn Meeting

RECOGNIZING the necessity of the American Soybean Association's broadening its policies to keep pace with the tremendous strides being made by the soybean industry, considerable time was devoted at the annual business meeting in Dearborn, Michigan, on August 20 to discussion of present-day organization needs.

Out of that discussion came a series of amendments to the constitution and by-laws. These were presented to the business meeting and adopted by that body. They deal with the internal organization structure, especially within the soybean producing states. They are as follows:

CONSTITUTIONAL AMENDMENTS
Offered at Business Meeting of American Soybean Association's Annual Meeting
August 20, 1940, Dearborn, Michigan

"The following amendments shall take precedent over such existing provisions of the Constitution and By-Laws as they amend, and shall become effective with their adoption:

Board of Directors:

"The governing body of the Association shall be a Board of Directors consisting of not more than one member from each of not less than ten of the leading soybean producing states. These directors shall be elected by the respective states on or before the first day of November of each year; if no state election is held before that date, said state director shall be elected at the annual meeting of the Association. Any vacancies in the Board of Directors may be filled by appointment by the President.

"The President, Vice-President and Secretary-Treasurer of the Association shall be ex-officio members of the Board of Directors.

"For the year 1941 (and the balance of the present year), the Board of Directors shall be elected at the annual business meeting of the Association on August 20, 1940, and shall serve until their successors are elected by the respective states.

Executive Committee:

"At the call of the President, the Board of Directors shall elect from their own membership an Executive Committee of five members. The President, Vice-President and Secretary-Treasurer shall be ex-officio members of the Executive Committee. The Executive Committee shall be vested with full powers to carry out the program and instructions of the Board of Directors.

State Executive Committee:

"Each Director shall select, or each state may elect, five members to serve as a State Executive Committee. These State Executive Committees shall have full responsibility for activities in the respective states and officially represent the respective states in all matters of policy of the Association."

—sbd—

Indiana Soybean Growers Attend Many Meetings

Variety demonstrations featuring the newer varieties of soybeans were established by county agents, in cooperation with prominent soybean growers, in practically every extensive soybean producing county in the State of Indiana last spring. These have served as the rallying points for local soybean growers who come together to discuss their problems and observe such new varieties as the early Richland for the fertile soils of the northern half of the state, and the late Macoupin for southwestern Indiana. Both varieties are satisfactory commercial soybeans with relatively high oil content.

Corn and Soybean Day, conducted at Purdue University on September 19, brought together hundreds of crop producers to survey the Experiment Station plots on which varieties are tested, rates and time of planting compared.

HEADQUARTERS FOR *Soy-Paints*

O'BRIEN

The development of better house and barn paints containing large percentages of soy bean oil begins with a Capital "O". O'Brien Chemists have perfected new, super-successful treatments for raw Soy Bean Oil. O'Brien Soy-Paints not only contain more of it per gallon; they are actually superior in quality to the best linseed oil paints. If you are interested, in purchase for use or resale, write the O'Brien Varnish Company, South Bend, Indiana.

JOIN CENTRAL SOYA RESEARCH STAFF

Dr. A. W. Kleinsmith

Dr. W. E. Holland

Dr. A. W. Kleinsmith, Clinton, Iowa, and Dr. W. E. Holland, Indianapolis, Indiana, have recently been added to the research staff of Central Soya Co., Inc., Fort Wayne, Indiana. Dr. Kleinsmith has recently completed his Ph.D. work at Purdue University and Dr. Holland received his Ph.D. at the University of Illinois in 1937. Dr. Holland has been associated previously with the Mellon Institute of Industrial Research, Pittsburgh, and the Northam Warren Corp.

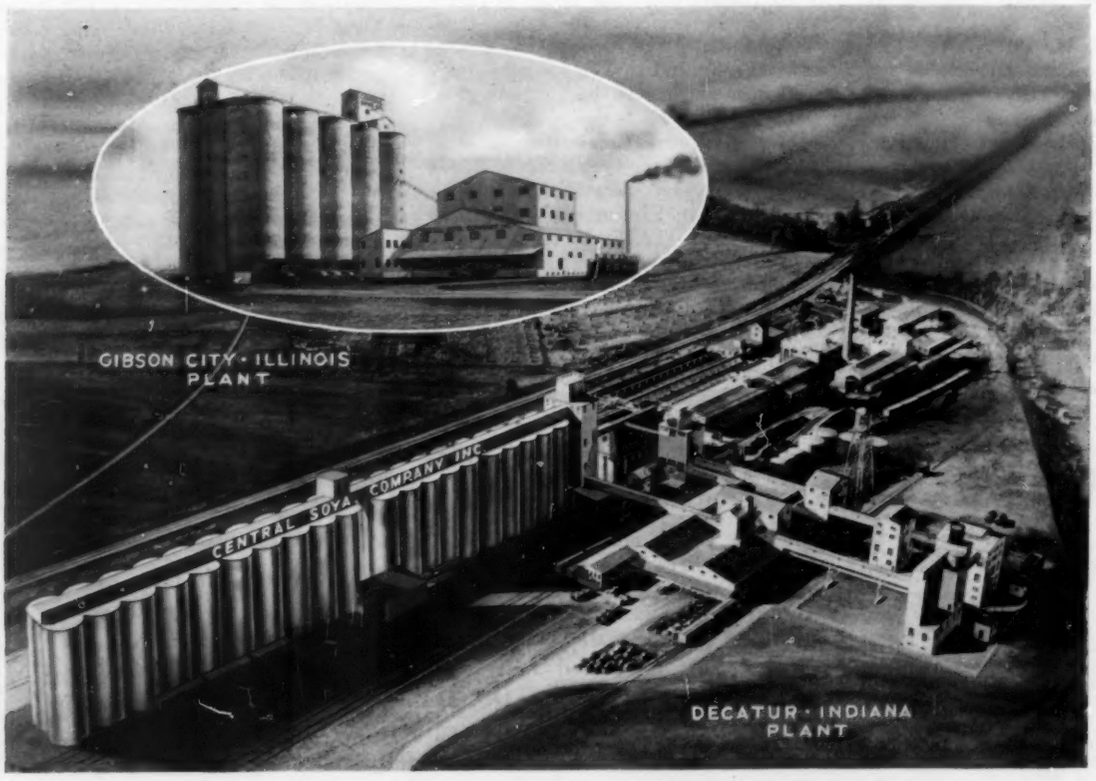
Both men will be under the supervision of Dr. E. B. Oberg, Research Director of Central Soya, at the laboratories at Decatur, Indiana, where much work is being done in the application of soybean products to feeds, foods, and industrial uses.

Indiana Soybean Crop Reduced

While the 1940 soybean acreage in Indiana harvested for seed shows an increase of almost 100,000 acres over that of the bumper year, 1939, yet due to the unfavorable conditions of the year, the crop forecast is for an average of only 13 bushels per acre, compared to 19.5 bushels harvested in 1939. Based on these estimates the Indiana soybean crop will be only slightly over 10 million bushels this year, compared to almost 14 million bushels last year.

Even before this year's crop was planted prospects were poor, due to both reduced germination and reduced vigor of the seed available for general use. Consequently, many fields with poor stands, and with seedlings that were not normally vigorous, resulted throughout the state. Cold wet soils of June prevented the usual cultivation, and weedy, grassy fields resulted. This gave the none too vigorous seedlings abnormal competition and a setback from which they never recovered. The mid-summer drought that approached that of 1936 in severity climaxed the previous handicap and resulted in a per acre yield prospect of 13 bushels, according to the October 1 crop report. Even in the unfavorable season of 1936 the state average was 14 bushels per acre and in favorable seasons the state average has reached 20 bushels. These figures should not be interpreted as indicating that Indiana growers are disheartened for they recognize the hardiness of the soybean crop and its place in Indiana.

Corn was likewise severely handicapped with a per acre prospective yield of 33 bushels compared to over 50 bushels in 1939, and it is probable, according to observers, that the average yield would have been even five bushels less had not hybrid corn added its superior drought resistance to boost the yield.



Central 41% Soybean Oil Meal

(Expeller)

★

Central Star Brand 44% Soybean Oil Meal

(Browned Extracted)

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Modern Plants of Central Soya Company, Inc., at Decatur, Indiana, and Gibson City, Ill.

CENTRAL SOYA COMPANY, *Incorporated*

MILLS: DECATUR, IND., AND GIBSON CITY, ILL. **GENERAL OFFICES: FORT WAYNE, INDIANA**

Inoculate Soy Beans *Every Year*

GET BIGGER YIELDS

•

GROW RICHER FEED

•

BUILD SOIL FERTILITY

It's not news to soybean growers that NITRAGIN inoculation often increases yields up to 50%, makes the hay 10 to 25% richer in protein and under proper management helps build up the soil. But too many farmers still think that once a field has grown inoculated soybeans, all the advantages of good inoculation are there in the soil to stay.

Both the findings of experimental stations and the experience of practical farmers prove it pays to inoculate every planting of soybeans. Here is what one leading agricultural college has reported: *"Even if the soil planted to soybeans does contain these bacteria, it is still advisable to inoculate the seed at the time of planting . . . Soybean nodule bacteria isolated from the soils of over 100 fields in Wisconsin on which this crop had been grown showed that approximately 50% of the bacterial strains were ineffective, 25% were fairly ineffective, and only 25% were good, effective strains that were able to cooperate with the plant in a satisfactory manner."*

Inoculate every seeding of soybeans with NITRAGIN—the oldest, most widely known inoculant. NITRAGIN strains have been built up by years of selection and testing, and used by practical farmers for 40 years. It costs only a few cents an acre. Sold by leading seed dealers everywhere.

THE NITRAGIN CO., *Inc.*
3871 N. Booth Street, MILWAUKEE, WIS.

42 YEARS OF PROGRESS

(Left) **This modern building, including the large new addition still under construction, is owned and devoted exclusively to NITRAGIN'S business. The Nitragin laboratories are the largest, most modern of their kind in America.**

NITRAGIN
INOCULATION FOR ALL LEGUMES

1941 Meeting in Iowa

An invitation presented by representatives of Iowa growers and processors, Iowa State College and the Des Moines Chamber of Commerce to hold the 1941 convention of the American Soybean Association in Iowa was accepted at the annual business meeting of the association in Dearborn, Michigan, on August 20, 1940.

Preliminary plans for the entertainment of the convention are already under way. Dates will be chosen later, and announced in *The Soybean Digest*. It is expected that a part of the program will be devoted to the study of research work which is being done at Iowa State College at Ames. A committee of Iowa men, consisting of representatives of the growers, the processors, Iowa State College, and other interested groups will be in charge of local arrangements.

—sbd—

Iowa Production Increases Again

The 1940 market soybean crop in Iowa is expected to exceed 13,000,000 bushels according to governmental crop reports issued on October 1. An indicated average yield for Iowa of 20 bushels per acre is forecast by these reports. This is contrasted with an Illinois forecast of 19.5 bushels, an Ohio 15, Indiana 14.5, and a Missouri yield of 10 bushels.

Iowa farmers will harvest 684,000 acres of soybeans for seed this year, according to the government figures. This is compared with 487,000 acres harvested for grain in 1939. The September 1 estimate of production for the state was 13,680,000 bushels, as compared with 10,227,000 bushels harvested last year. While Iowa figures on acreage and production are larger than 1939, the lower acre yields in the drought-stricken sections of Indiana and Ohio are expected to cut the total national production to approximately two million bushels less than that of a year ago, when 87 million bushels of beans were harvested.

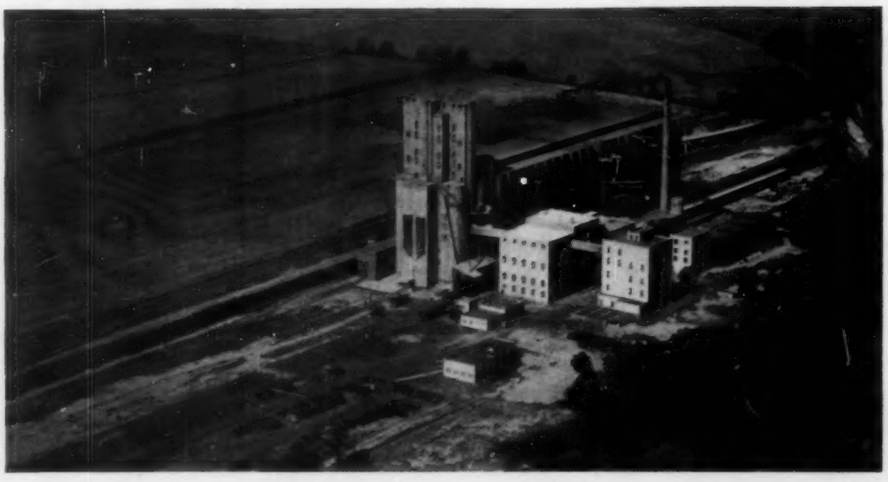
While increasing his production of lard during the past year the Iowa farmer has also increased his production of oils now going into competing products. The increases have been at the expense of foreign fats which had been imported — and are now being crowded out of the markets. For the first time in many years the domestic fats and oils market is being supplied almost in full by the American farmer.

Indiana Starts Soybean Yield Contest

In an experimental way, the Indiana Corn Growers' Association, with the cooperation of the Extension Service of the state, is trying out a soybean yield contest for the first time in 1940. Its purpose the first year is to find out whether the method of measuring yields is practical.

To participate in this contest any member of the Association may have the yields of the two best acres in a field of not less than ten acres measured by disinterested parties, combined separately and weighed.

Through the cooperation of two enthusiastic growers appropriate awards are already being made available. Roy Caldwell of Camden, one of the pioneer growers of the state, has offered a trophy to the winner of the state contest, while Ed Shriner, one of the extensive growers and seed distributors in the most intensive soybean producing county of the state, Benton County, is cooperating in supplying the county awards. Should this contest gain the momentum of the Five Acre Corn Contest in the state, a great deal of information can be obtained on cultural methods, etc.



The Largest Soybean Processing Plant in the United States. Located at Decatur, Illinois.

Other Soybean Processing Plants Strategically Located at:

CHICAGO
TOLEDO
MILWAUKEE
MINNEAPOLIS
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OUR RECENTLY ENLARGED FACILITIES AT DECATUR PERMIT US TO OFFER THE BEST OF SERVICE ON STRAIGHT OR MIXED CARS OF 44% AND 41% SOYBEAN PRODUCTS . . . MEAL, FLAKES AND PELLETS.

The Mark of

ARCHER BRAND

Quality Soybean Products

ARCHER-DANIELS-MIDLAND COMPANY
MINNEAPOLIS, MINN.

Plastic Fords

(*Continued from page 5*)

tion) would consume 50,000 tons of synthetic chemicals, 170,000 tons of agricultural products. Possible make-up: 100,000 bales of cotton (U. S. annual output 12,000,000 bales); 500,000 bushels of wheat (current production 792,332,000 bushels, surplus 250,000,000); 700,000 bushels of soybeans (81,541,000 bushels grown this year); 500,000 bushels of corn (ten-year average yield 2,299,342,000 bushels); lesser amounts of hides, lard, glue, pine pitch, sugar-cane alcohol and flax. Imported materials would be cork, rubber, tung oil and ramie, Egyptian mummy-wrapping fibre. Best of all, wheat, corn and soybeans are interchangeable. Ford can use all three, or only one.

Once formed, Ford's plastic has not the tensile strength of steel, hence will not be used for frame, chassis or motor blocks. But sheets account for half the steel that goes into modern automobiles. If Ford's plastic bodies become universal, total U. S. use of steel may be cut 10%. Worried, steelmen sent a long-nosed research committee to Dearborn last month, have not peeped since.

On the surface Henry Ford and Robert Boyer have done more to plague steelmakers than to solve the farm problem. But if their dream is true, the technological novelty known as plastics has graduated from its celluloid-and-Beetleware phase into an instrument of industrial revolution.

RATS . .

RID YOUR PLANT OR FARM OF THIS LIVING SCOURGE

Use . . .

RAT RUIN

Non-poisonous to humans or pets

A Squill Product made according to U. S. Government Formula 130 and endorsed by U. S. Department of Agriculture.

TRIAL BOX . . . **$1.00**

Enough to Kill 200 Rats **Postpaid**

Also packed in bushel, half bushel, and one-fourth bushel baskets for quantity users. Prices on request.

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WHEN SCIENCE AND RESEARCH MAKE IT SO . . .

the Soybean is a "Magic Bean". To that end The Glidden Company has expended many thousands of dollars in the development and production of unusual products from the Soybean. Glidden's soybean products have been used in large and small amounts in the following industries:

Feed	**Lacquers**	**Adhesives**
Fertilizer	**Margarine**	**Core Oil**
Shortening	**Salad Oil**	**Canned Foods**
Paints	**Sausage**	**Paper Manufacturing**
Confectionery	**Baking**	**Pharmaceutical**

THE GLIDDEN COMPANY

SOYA PRODUCTS DIVISION

5165 West Moffat Street • Chicago, Illinois

National Headquarters — Cleveland, Ohio

ORIGINATORS OF UNUSUAL PRODUCTS FROM THE SOYBEAN

Association Adopts Trade Barrier Stand

ENDEAVORING to clarify its position on present-day trade barriers between states, the American Soybean Association, at its annual meeting in Dearborn, Michigan, in August, adopted the following as number seven of its resolutions:

7. That, Whereas, the American oleomargarine industry is becoming a larger and larger market for American Soybean oil, and

Whereas, more than 82,000,000 pounds of American soybean oil were used in oleomargarine during the fiscal year ending June 30th, 1940, and

Whereas, there are now in effect federal and state laws which unfairly tax and restrict the sale and consumption of this product and at the same time, restrict a profitable market for soybean oil, and

Whereas, these taxes and restrictions are unnecessary and constitute a trade barrier in commerce to soybean oil;

Therefore, be it resolved, that the American Soybean Association condemn such laws as unfair and discriminatory and pledges its support and active cooperation in seeking the repeal of all federal and state laws imposing unnecessary and unfair restrictions upon the sale of oleomargarine made of domestic fats and oils.

This resolution, submitted by the resolutions committee consisting of K. E. Beeson, Indiana chairman; George Strayer, Iowa; George Banks, Arkansas; and David Wing, Ohio, was submitted to the business meeting for discussion and then adopted by that body. It presages the stand of the organization on legislative matters during the 1940-41 year.

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Soybean Special To Tour Indiana

The Ohio-Indiana Soybean Special, following its tour of Ohio from February 24 to March 7, will open its Indiana schedule on March 10, 1941, at Vincennes, Indiana and conclude it in the northern part of the state at LaPorte on March 19. Sponsored by the Agricultural Development Department of the Baltimore and Ohio Railroad, it will traverse the lines of that railroad which cross both southern and northern Indiana and reach into many heavy soybean producing counties. Cooperating with the above department are Ohio State and Purdue Universities, the United States Department of Agriculture, the National Soybean Processors Association, the American Soybean Association and several other agencies. Both commercial and edible soybean varieties will receive attention.

Market Street. . .

We invite the readers of *The Soybean Digest* to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry advertise them here.

Rate: 5c per word per issue. Minimum insertion $1.00.

Fat Imports Decline in 1940

As would be expected with the increased 1939 soybean production and with wartime shipping hazards, the imports of fats and oils into the United States during the first six months of 1940 were cut 17% below those of a year earlier. The 95 million pounds of imports were replaced by domestic fats and oils, chiefly soybean oil, linseed oil, and lard. These domestic products have largely replaced importations in the edible field, chiefly margarines and shortenings, while the soap industry continues to import considerable quantities of the "lauric-acid" fats which are used to produce quick-lathering qualities and hardness to soap.

UNIFORMITY

in Quality and Protein Content

KELLOGG'S SOYBEAN OIL MEAL

Old Process . . . 41% Protein

Careful mechanical control of processing, supervised by chemists in each plant and by the central control laboratory, is your assurance of the uniform excellence of Kellogg Oil Meals.

Kellogg Mills and Sales Offices, located to serve all markets, assure proper handling of orders and prompt deliveries. Kellogg service is dependable.

KELLOGG'S THE TEST TELLS 1894

KELLOGG'S *Old Process* LINSEED MEAL

SPENCER KELLOGG AND SONS, INC.

Sales Offices: Buffalo, Chicago, Decatur, Ill., Des Moines, Minneapolis, Los Angeles

Mills: Buffalo, Chicago, Decatur, Ill., Des Moines, Minneapolis, Edgewater, N. J., Los Angeles

"Keep Ahead With Kellogg"

You Get Both { Low Price / Long Experience

in This Better-Built Combine for

SOY BEANS

If you have BOTH soybeans and small grains, this Case Model F combine is the type to fit your farm because it is built from the beginning for BOTH. It takes a 54-inch swath. What's more important, it has capacity to take care of what it cuts . . . capacity to thresh, separate, and clean the seed . . . even in heavy, tough, tangled crops. The "F" gives you capacity where it counts . . . and gives it to you at a low price.

To do BOTH calls for special skill and experience. Case has been building grain-saving machines for 98 years. Whether you choose the "F", the six-foot "A-Six", or one of the 8, 10, or 12-foot Case combines, you get the benefit of the longest and broadest world-wide experience in saving every sort of threshable crop. In any size you get a cylinder properly proportioned for first-class work BOTH from the windrow and in standing crops. See your Case dealer about them.

You Get More for the Money in Any Case Machine

In Case bean-and-beet planters, narrow-row cultivators, and Seedmeter drills you will find features of extra value for soybean culture, yet they cost no more. Case Centennial plows and Power-Control disk harrows prepare better seedbeds with less time and bother. Ten new models of Flambeau Red Case tractors offer fast, low-cost power for every type and size of farm. Write for free folder on any machines that may interest you. J. I. Case Co., Racine, Wis.

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TEST SOYBEANS WITH

Greater ACCURACY!

USE

SEEDBURO QUALITY

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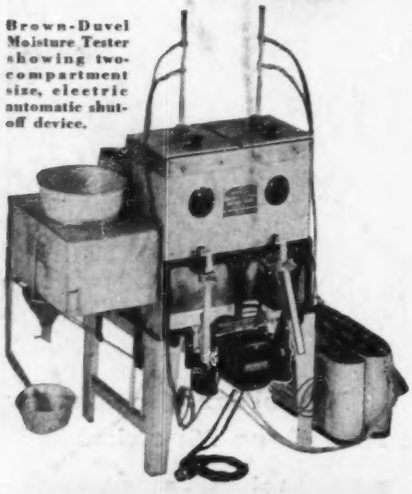
The Steinlite Moisture Tester makes test in one minute. Accurate—portable—operates like a radio.

Tag-Heppenstall Moisture Meter. A rapid and accurate method of determining the moisture content of soybeans.



Brown-Duvel Moisture Tester showing two-compartment size, electric automatic shut-off device.

Soybean Sieves

To realize the greatest profit on soybeans and soybean products, make sure your tests are accurate.
Good testing equipment can save you many times its cost in a very short time.

SEEDBURO QUALITY equipment has been manufactured for 28 years. Leading mills and elevators throughout the world depend on Seedburo Quality equipment for accurate, dependable tests. It is manufactured according to Government specifications and is completely guaranteed.

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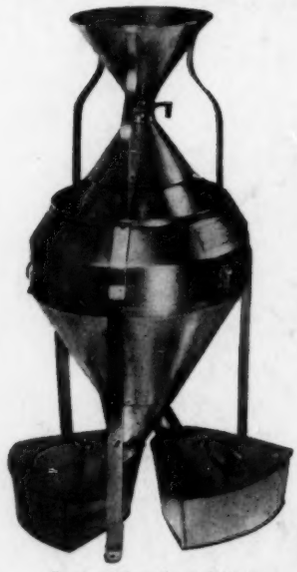
Steinlite Electric Moisture Testers
Tag-Heppenstall Moisture Meters
Carter-Simon Rapid Moisture Testers

Scales for all purposes
Boerner Samplers or Mixers
Weight Per Bushel Testers
Dockage Testers
Sample Pans
Sieves
Triers
Germinators
Magnifying Glasses

and a complete line of everything for your testing department.

Write for Free Catalog 105
Showing the Complete Line



Boerner Sampler or Mixer

Improved Boerner Weight per Bushel Apparatus

Improved Weight Per Bushel Testers, built to withstand rough usage with constant accuracy. Relief etched beam making readings sharp and clear.

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